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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,811	10/12/2006	Hiroshi Hoshigami	2005_1961A	5590

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EXAMINER	
CLAWSON, STEPHEN J	
ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
07/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,811	HOSHIGAMI ET AL.	
	Examiner	Art Unit	
	STEPHEN J. CLAWSON	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant has canceled claims 1-4 and added claims 5-8.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shea (5,809,061), and further in view of Spruyt (2002/0118658).

Regarding claim 5, Shea discloses a communication system comprising a first

apparatus and a second apparatus in which a plurality of frequency signals are communicated between said first apparatus and said second apparatus, said first apparatus comprising:

a multiplexing means for multiplexing a plurality of signals which are different in frequency from each other,**(See Shea col. 4, lines 21-22; Shea discloses multiplexed signals covering a plurality of frequencies. Fig. 3 shows multiplexed information using CDMA modulated information covering a plurality of frequencies.)** and for transmitting at least one multiplexed signal to said second apparatus; and **(See Shea fig. 2; Fig. 2 shows transmitting a signal from a base station to a mobile station (second apparatus).)**

a transmission-sided reference frequency signal level detecting means for detecting electric power of a reference signal **(See Shea col. 4, line 66 – col. 5 line 11; The amplitude of a pilot tone is detected and used to adjust gain.)** among the plurality of signals before multiplexing by said multiplexing means; and said second apparatus comprising: **(See Shea col. 4, lines 21-22; Shea discloses multiplexed signals covering a plurality of frequencies. Fig. 3 shows multiplexed information using CDMA modulated information covering a plurality of frequencies.)**

a separating means for separating the reference signal from the at least one multiplexed signal which is received from said first apparatus; and **(See Shea fig. 1; Fig. 1 shows a mobile station receiver "14" that separates the pilot tone from the channel using a filter.)**

a reception-sided reference frequency signal level detecting means for detecting electric power of the reference signal which is separated by said separating means, wherein said communication system further comprises a signal level control means for controlling electric power of one or more signals other than the reference signal based on a comparison between a result detected by said transmission-sided reference frequency signal level detecting means and a result detected by said reception-sided reference frequency signal level detecting means. **(See Shea col. 4, line 66 – col. 5 line 11; fig. 1; The amplitude of a pilot tone is detected and used to adjust gain or power level of the return link (frequencies). This pilot tone provides for continuous adjustment (i.e. a feedback loop) based upon the signal received at the base station from the mobile station (i.e. the difference between the expected or needed and the received).)**

Shea does not explicitly disclose wherein the first apparatus and the second apparatus communicate via a common cable. It would be readily apparent to one of ordinary skill in the art of communications to replace a wireless implementation with a wired implementation. However, Spruyt does. **(See Spruyt fig. 1, para. 33; Spruyt discloses transmission of signals between a first apparatus and a second apparatus via a cable connection, a satellite connection, or a radio link through the air, etc.)** Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to combine the elements of Shea with the elements of

Spruyt. One would make the combination in order to create a more efficient, robust network.

Regarding claim 6, the combination discloses the communication system of claim 5, wherein said transmission-sided reference frequency signal level detecting means detects an average value of electric power of the reference signal;

said reception-sided reference signal level detecting means detects an averaged value of electric power of the reference signal; **(See Shea fig. 1 "Mobile Station Receiver '14'"; Fig. 1 shows a mobile station receiver that detects and measures the power of the pilot tone after it has been filtered from the rest of the signals. (See fig. 1 "36 Pilot tone filter" and "40 Power measurement"; See also col. 7 line 55 – col. 8 line 10))**

said second apparatus further comprises a level detected result transmitting means for transmitting the detected result by said reception-sided reference frequency signal level detecting means to said first apparatus; (**See Shea col. 7 line 55 – col. 8 line 10) The power measurement device detects the result and adjusts the gain of the outgoing link. Thus sending the result back to the first apparatus.)**

said first apparatus further comprises a level detected result receiving means for receiving the detected result which is transmitted by said level detected result transmitting means; **(See Shea fig. 1; Fig. 1 shows a return link power control (AGC) which is received by the base station and used to adjust the pilot tone ("power control")).**

said signal level control means is provided in said first apparatus; **(See Shea fig. 1 "adaptive power control (AGC)" coupled to "pilot tone 24")**

said signal level control means includes a reference signal level control means for controlling electric power of the reference signal based on the compared result, **(See Shea fig. 1 "adaptive power control (AGC)" coupled to "pilot tone 24")**

Neither Shea nor Spruyt discloses wherein the signal level control means also includes control modes storage means for storing a corresponding item between controlled results by said reference signal level control means and modes for controlling the electric power of one or more signals other than the reference signal; and

said signal level control means controls the electric power based on the corresponding item stored in said control modes storage means. However, one of ordinary skill in the art would readily recognize that in order for the inventions disclosed in Shea or Spruyt to work some form of storage would have to be present. This includes buffers, memory, etc. Therefore it would have been obvious to one of ordinary skill in the art at the time of the claimed invention.

Regarding claim 7, the combination discloses the communication system of claim 5, wherein

said communication system corresponds to a wireless base station system;

said first apparatus corresponds to an indoor unit; **(See Shea fig. 1; Fig. 1 shows a base station transmitter that may be located indoors or outdoors.)**

said second apparatus corresponds to an outdoor unit; and **(See Shea fig. 1; Fig. 1 shows a mobile station receiver that may be located indoors or outdoors.)**

said reference signal corresponds to a signal of a transmission system. **(See Shea col. 4 lines 62-63; A pilot tone signal is used as a reference signal in transmission system.)**

Regarding claim 8, the combination discloses the communication system of claim 6, wherein:

said communication system corresponds to a wireless base station system;

said first apparatus corresponds to an indoor unit; **(See Shea fig. 1; Fig. 1 shows a base station transmitter that may be located indoors or outdoors.)**

said second apparatus corresponds to an outdoor unit; and **(See Shea fig. 1; Fig. 1 shows a mobile station receiver that may be located indoors or outdoors.)**

said reference signal corresponds to a signal of a transmission system. **(See Shea col. 4 lines 62-63; A pilot tone signal is used as a reference signal in transmission system.)**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN J. CLAWSON whose telephone number is (571)270-7498. The examiner can normally be reached on M-F 7:30-5:00 pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN J. CLAWSON/
Examiner, Art Unit 2416

/Jason E Mattis/
Primary Examiner, Art Unit 2416